SEQUENCE LISTING

<110>	Shah, Salehuzzaman Weselake, Randall Alberta Research Council Inc.						
<120>	Transgenic Plants With Reduced Level of Saturated Fatty Acid and Methods for Making Them						cid and
<130>	080426-000000US						
<140> <141>	US 10/583,301 2006-06-16						
<150> <151>	CA 2,450,000 2003-12-18						
<150> <151>	WO PCT/CA04/02156 2004-12-17						
<160>	12						
<170>	PatentIn version 3.3						
<210> <211> <212> <213>	1 837 DNA Synechococcus elongatus ATCC #33912, deposited as Anacystis nidulans						
<220> <223> delta-9 desaturase (des9, DSG), fatty acyl-CoA desaturase, fatty acid desaturase							
<400>	1	~ h ~ h ~					
				ttcaactggc			
				ctgccggcca		_ , ,	
				ggttgttttg			
				cccaaatggc			
				atcgaatgga			
cacctcc	act	ctgaccaaga	tgtcgatcac	cacgactcca	acaagggttt	cctctggagt	360
cacttcc	tgt	ggatgatcta	cgaaattccg	gcccgtacgg	aagtagacaa	gttcacgcgc	420
gatatcg	ctg	gcgaccctgt	ctatcgcttc	tttaacaaat	atttcttcgg	tgtccaagtc	480
ctactgg	ggg	tacttttgta	cgcctggggc	gaggcttggg	ttggcaatgg	ctggtctttc	540
gtcgttt	ggg	ggatcttcgc	ccgcttggtg	gtggtctacc	acgtcacttg	gctggtgaac	600
agtgcta	ccc	acaagtttgg	ctaccgctcc	catgagtctg	gcgaccagtc	caccaactgc	660
tggtggg	ttg	cccttctggc	ctttggtgaa	ggctggcaca	acaaccacca	cgcctaccag	720
tactcgg	cac	gtcatggcct	gcagtggtgg	gaatttgact	tgacttggtt	gatcatctgc	780

- <210> 2
- <211> 278
- <212> PRT
- <213> Synechococcus elongatus ATCC #33912, deposited as
 Anacystis nidulans
- <220>
- <223> delta-9 desaturase (des9, DSG), fatty acyl-CoA desaturase,
 fatty acid desaturase
- <400> 2
- Met Thr Leu Ala Ile Arg Pro Lys Leu Ala Phe Asn Trp Pro Thr Ala 1 5 10 15
- Leu Phe Met Val Ala Ile His Ile Gly Ala Leu Leu Ala Phe Leu Pro 20 25 30
- Ala Asn Phe Asn Trp Pro Ala Val Gly Val Met Val Ala Leu Tyr Tyr 35 40 45
- Ile Thr Gly Cys Phe Gly Ile Thr Leu Gly Trp His Arg Leu Ile Ser 50 60
- His Arg Ser Phe Glu Val Pro Lys Trp Leu Glu Tyr Val Leu Val Phe 65 70 75 80
- Cys Gly Thr Leu Ala Met Gln His Gly Pro Ile Glu Trp Ile Gly Leu 85 90 95
- His Arg His His Leu His Ser Asp Gln Asp Val Asp His His Asp 100 105 110
- Ser Asn Lys Gly Phe Leu Trp Ser His Phe Leu Trp Met Ile Tyr Glu 115 120 125
- Ile Pro Ala Arg Thr Glu Val Asp Lys Phe Thr Arg Asp Ile Ala Gly 130 135 140
- Asp Pro Val Tyr Arg Phe Phe Asn Lys Tyr Phe Phe Gly Val Gln Val 145 150 155 160
- Leu Leu Gly Val Leu Leu Tyr Ala Trp Gly Glu Ala Trp Val Gly Asn 165 170 175
- Gly Trp Ser Phe Val Val Trp Gly Ile Phe Ala Arg Leu Val Val Val 180 185 190

```
Tyr His Val Thr Trp Leu Val Asn Ser Ala Thr His Lys Phe Gly Tyr
        195
                            200
                                                205
Arg Ser His Glu Ser Gly Asp Gln Ser Thr Asn Cys Trp Trp Val Ala
    210
                        215
Leu Leu Ala Phe Gly Glu Gly Trp His Asn Asn His His Ala Tyr Gln
                    230
                                                            240
Tyr Ser Ala Arg His Gly Leu Gln Trp Trp Glu Phe Asp Leu Thr Trp
                245
                                    250
Leu Ile Ile Cys Gly Leu Lys Lys Val Gly Leu Ala Arg Lys Ile Lys
            260
                                265
Val Ala Ser Pro Asn Asn
        275
<210> 3
<211> 4
<212> PRT
<213> artificial
<220>
<223> endoplasmic reticulum retention and retrieval signal sequence
<220>
<221> MOD RES
<222>
      (3)..(4)
<223> Xaa is any amino acid
<400> 3
Lys Lys Xaa Xaa
<210> 4
<211> 4
<212> PRT
<213> artificial
<220>
<223> endoplasmic reticulum retention and retrieval signal sequence
<400> 4
Lys Asp Glu Leu
<210> 5
<211> 4
<212> PRT
```

<213> artificial

```
<220>
<223> endoplasmic reticulum retention and retrieval signal sequence
<400> 5
Lys Lys Ser Ser
<210> 6
<211>
      4
<212> PRT
<213> artificial
<220>
<223> endoplasmic reticulum retention and retrieval signal sequence
<400> 6
His Asp Glu Phe
<210> 7
<211> 4
<212> PRT
<213> artificial
<220>
<223> endoplasmic reticulum retention and retrieval signal sequence
<400> 7
Lys Glu Glu Leu
<210> 8
<211> 4
<212> PRT
<213> artificial
<220>
<223> endoplasmic reticulum retention and retrieval signal sequence
<400> 8
Lys Asp Gln Leu
<210> 9
<211>
      35
<212> DNA
<213> artificial
<220>
<223> amplification primer DSG-XhoI-5'
```

```
<400> 9
ccccctcga gatgaccctt gctatccgac ccaag
                                                                     35
<210> 10
<211> 36
<212> DNA
<213> artificial
<220>
<223> amplification primer DSG-XhoI-3'
<400> 10
ccccctcga gttagttgtt tggagacgcc actttg
                                                                     36
<210> 11
<211>
      45
<212> DNA
<213> artificial
<220>
<223>
       amplification primer des9-3'-ER
<400> 11
cccccctcg agttaagaag actttttgtt gtttggagac gccac
                                                                     45
<210> 12
<211> 4
<212> PRT
<213> artificial
<220>
<223> endoplasmic reticulum retention and retrieval signal sequence
<220>
<221> MOD RES
<222>
      (3)..(4)
<223> Xaa is any amino acid other than Ser
<400> 12
Lys Lys Xaa Xaa
```

. . . .